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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/502,882	02/11/2000	Dhritiman Banerjee	56115534-118128	5822

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EXAMINER

HOANG, THAI D

ART UNIT

PAPER NUMBER

2667

DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/502,882

Applicant(s)

BANERJEE ET AL.

Examiner

Thai D Hoang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed on 02/13/2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-9 and 11-26 is/are rejected.
- 7) ☒ Claim(s) 4 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities:

The cross-reference to related application portion on page 1 of the specification misses the serial number of the Patent Applications.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-9 and 11-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al., US Patent No. 6,298,038 B1 in view of Dolby et al., US Patent No. 6,038,231, hereafter referred to as Martin and Dolby respectively.

Regarding claims 1, 5, 7, 11, 13-15 and 18, Martin discloses a configuration for a transport node of a telecommunication system comprises a pair of transparent mux/demux provided at two sites. Martin discloses that the system comprises a Tmux 40, which comprises a plurality of input/output ports 61-64 coupled to a plurality of gigabit links OC-48, multiplexes data for outputting multiplexed data at the output port 71 and transmits multiplexed data to the receiving side 50 through a fiber optic link 30; see figures 4-7; col. 1, line 66 –col. 2, line 18; col. 7, lines 34-47 (a first plurality of Gigabit Ethernet input/output ports, each port adapted to be coupled to a first

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Gigabit Ethernet link carrying data packets; a multiplexer interface coupled to said first input/output ports, said multiplexer interface being adapted to receive said data packets; a multiplexer coupled to said multiplexer interface, said multiplexer being adapted to receive said data packets from said multiplexer interface and to multiplex said data packets; a transmitter coupled to said multiplexer; and an optical link coupled to said transmitter being adapted to transmit the multiplexed data packets over said optical link to a receiver). Also, Martin discloses that the Tmux 40 comprises a fault detector 70, which is provided for detecting errors on the input span and transmitting them to the far-end TMux. In addition, Martin teaches that a line alarm inhibit signal (AIS) is generated if a line failure condition occurs on either tributary input span 51, 53, 55, 57 or the optical link 30; col. 13, line 66 –col. 14, line 6; col. 14, lines 38-60. Martin does not clearly teach that the Tmux message or AIS is in place of data packets. However, Dolby discloses a method and system called data suppression and regeneration. Dolby teaches that if a cell is lost or misinserted, a dummy cell is inserted; col. 10, lines 43-67. It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt a dummy cell disclosed by Dolby in to Martin's system in order to maintain system synchronization, and adapt the Ethernet protocol into Martin's system for expanding the market, since it could be adapted with conventional systems used Ethernet protocol in the network.

Regarding claims 2 and 8, Martin discloses the system comprises a Tmux 50 for receiving multiplexed data transmitted from Tmux 40. The Tmux 50 comprises a demultiplexer to demultiplex data to a plurality of output ports, which are coupled to a

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plurality or gigabit links 52, 54, 56 and 58; see figure 6 (said a receiver, which is coupled to said optical link and is adapted to receive said multiplexed data packets from said optical link; a demultiplexer coupled to said receiver, said demultiplexer being adapted to demultiplex the received multiplexed data packets; and a demultiplexer interface coupled to said demultiplexer, said demultiplexer interface being adapted to receive the demultiplexed data packets, wherein said demultiplexer interface comprises a plurality of second optical transceivers that are each adapted to be coupled to a plurality of second Gigabit Ethernet links). Also, Martin discloses that the Tmux 50 comprises a fault detector 90, which detects error and failure of the received data and alarm to the effected port; col. 14, lines 7-20 and 55-67.

Regarding claims 3 and 9, Martin teaches that the system uses WDM, therefore, it indicates that the system comprises a photo detector to detect failures or errors of the data signal. Furthermore, Tmuxes 40 and 50 are multiplexers/demultiplexers for transmitting and receiving data in both directions (figs 2-7; col. 1, line 67, col. 2, line 60, col. 3, line 5). Therefore, if the Tmux 40 could be able to detect failures of the links 51, 53, 55, 57 and generate AIS signal (col. 7, lines 34-47, col. 14, lines 38-54), the Tmux 50 could be able to detect failures of the links 52, 54, 56 and 58 and generate AIS signal, similarly (The system of claim 2, further comprising a photo detector circuit coupled to said demultiplexer; wherein said photo-detector circuit is adapted to detect a second loss of signal in said optical link and in response, generate a deactivate signal and transmit the deactivate signal to said second optical transceivers).

Regarding claims 6 and 12, Martin does not teach the Tmux multiplexes data based on bit by bit basic. However, bit multiplexer is well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the method of bit multiplexing into Martin's system in order to speed up the system.

Regarding claims 16 and 19, Martin's system inherently encodes data using a predetermined code. Martin does not disclose the data are carried in variable length packets. However, the variable length packets are well known in the art, such as Ethernet packet. It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt variable length packets to Martin's system for advantages as cited above with respect to claim 1.

Regarding claims 17 and 20, when a loss signal is detected, the system disclosed by Martin inherently does not produce a data code of the packet (said fault identifying signal is a signal that said predetermined code does not produce.)

Regarding claims 21-26, Tuxes 40 and 50 in the system disclosed by Martin inherently insert AIS to the data as long as the system detects any failure in the links (signal loss code insert is transmitted continuously by said transmitter as long as said first loss of signal is detected.)

Allowable Subject Matter

Claims 4 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai D Hoang whose telephone number is (703) 305-3232. The examiner can normally be reached on Monday-Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (703) 305-4378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thai Hoang


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 3/8/09